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CLAIMS

1. An antibody or functional fragment thereof which binds with (e.g. to) and neutralises human NOGO.
- 10 2. An antibody according to claim 1 which binds to a region of human NOGO-A protein between amino acids 586 to 785.
3. An antibody according to claim 2 which binds to a region of human NOGO-A between amino acids 586 to 685.
- 15 4. An antibody according to claim 2 which binds to a region of human NOGO-A between amino acids 686 to 785.
5. An antibody according to claim 1 which comprises each of the following CDRs:  
20 Light chain CDRs: SEQ.I.D.NO:1, 2 and 3  
  
Heavy chain CDRs:SEQ.I.D.NO: 4,5 and 6.
- 25 6. An antibody according to claim 1 which comprises each of the following CDRs:  
Light chain CDRs: SEQ.I.D.NO:7, 8 and 9  
  
Heavy chain CDRs: SEQ.I.D.NO:10,11 AND 12.
- 30 7. An antibody according to claim 1 which comprises each of the following CDRs:  
Light chain CDRs:SEQ.I.D.NO:13,14 AND 15;

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Heavy chain CDRs: SEQ.I.D.NO:16,17 AND 18.

10 8. An antibody according to claim 5 which comprises a heavy chain variable domain which comprises each of the CDRs selected from CDRH1, CDRH2 and CDRH3 and a light chain variable domain which comprises one or more CDRs selected from CDRL1, CDRL2 and CDRL3.

15 9. An antibody according to claim 6 which comprises a heavy chain variable domain which comprises each of the CDRs selected from CDRH1, CDRH2 and CDRH3 and a light chain variable domain which comprises one or more CDRs selected from CDRL1, CDRL2 and CDRL3.

20 10. An antibody according to claim 7 which comprises a heavy chain variable domain which comprises each of the CDRs selected from CDRH1, CDRH2 and CDRH3 and a light chain variable domain which comprises one or more CDRs selected from CDRL1, CDRL2 and CDRL3.

25 11. An antibody of any one of claims 1 to 10 which is a monoclonal antibody.

12. An antibody of any one of claims 1 to 13 which is a humanised or chimeric antibody.

30 13. An antibody according to claim 8 wherein the heavy chain variable region comprises the amino acid sequence set forth in SEQ.I.D.NO:37

35 14. An antibody according to claim 9 wherein the heavy chain variable region comprises the amino acid sequence set forth in SEQ.I.D.NO:38.

5 15. An antibody according to claim 10 wherein the heavy chain variable region comprises the amino acid sequence set forth in SEQ ID NO:39.

16. An antibody according to claim 8 or 13 wherein the light chain variable region comprises the amino acid sequence set forth in SEQ ID NO:40.

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17. An antibody according to claim 9 or 14 wherein the light chain variable region comprises the amino acid sequence set forth in SEQ ID NO:41.

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18. An antibody according to claim 10 or 15 wherein the light chain variable region comprises the amino acid sequence set forth in SEQ ID NO:42.

20 19. A pharmaceutical composition comprising an anti-NOGO antibody or functional fragment thereof according to any preceding claim together with a pharmaceutically acceptable diluent or carrier.

25 20. A method of treatment or prophylaxis of stroke and other neurological diseases/disorders in a human which comprises administering to said human in need thereof an effective amount of an anti-NOGO antibody, according to any one of claims 1-18 including altered antibodies or a functional fragment thereof.

30 21. The use of an anti-NOGO antibody according to any one of claims 1-18, including altered antibodies or a functional fragment thereof in the preparation of a medicament for treatment or prophylaxis of stroke and other neurological diseases/disorders.

35 22. A method of inhibiting neurodegeneration and/or promoting functional recovery in a human patient suffering, or at risk of developing, a stroke or other neurological disease/disorder which comprises administering to said human in

5 need thereof an effective amount of an anti-NOGO antibody according to any one of claims 1-18, including altered antibodies or a functional fragment thereof.

23. The use of an anti-NOGO antibody according to any one of claims 1-18, including altered antibodies or a functional fragment thereof in the preparation of  
10 a medicament for inhibiting neurodegeneration and/or promoting functional recovery in a human patient afflicted with, or at risk of developing, a stroke and other neurological disease/disorder.

24. A method of treating or prophylaxis of stroke or other neurological  
15 disease/disorder in a human comprising the step of parenteral administration of a therapeutically effective amount of an anti-NOGO antibody according to any one of claims 1 to 18 to said human.

25. The method of claim 24 wherein the anti-NOGO antibody is administered  
20 intravenously.

26. The method of any one of claims 20 to 24 wherein the other neurological disease/disorder is selected from the group consisting of;  
25 traumatic brain injury, spinal cord injury, Alzheimer's disease, fronto-temporal dementias (tauopathies), peripheral neuropathy, Parkinson's disease, Huntington's disease and multiple sclerosis.

27. A method of promoting axonal sprouting comprising the step of contacting  
30 a human axon with an anti-NOGO antibody of claims 1 to 18.

28. The method of claim 27 wherein the method is in vitro.

29. A method of producing an anti-NOGO antibody of any one of claims 1 to 18 which specifically binds to and neutralises the activity of human NOGO-A which  
35 method comprises the steps of;

- (a) providing a first vector encoding a heavy chain of the antibody;
- (b) providing a second vector encoding the light chain of the antibody;

5 (c) co-transfected a mammalian host cell with said first and second vectors;

(d) culturing the host cell of step (c) in culture media (preferably serum free) under conditions permissive to the secretion of the antibody from said host cell into said culture media;

10 (e) recovering the secreted antibody of step (d).

30. A method of producing an anti-NOGO antibody that competitively inhibits the binding of the antibody of any one of claims 1 to 18 which method comprises the steps of;

15 (a) providing a first vector encoding a heavy chain of the antibody;

(b) providing a second vector encoding the light chain of the antibody;

(c) co-transfected a mammalian host cell with said first and second vectors;

(d) culturing the host cell of step (c) in culture media (preferably serum free) under conditions permissive to the secretion of the antibody from said host cell into said culture media;

20 (e) recovering the secreted antibody of step (d).

31. A method of producing an intravenously administrable pharmaceutical composition comprising an anti-NOGO antibody which binds to and neutralises the activity of NOGO-A which method comprises the steps of;

25 (a) providing a first vector encoding a heavy chain of the antibody;

(b) providing a second vector encoding the light chain of the antibody;

(c) introducing (e.g. co-transfected) said first and second vectors into a mammalian host cell;

30 (d) culturing the host cell of step (c) in culture media (preferably serum free) wherein said host cell secretes into said culture media an antibody comprising a light and heavy chain;

(e) recovering (and optionally purifying) the secreted antibody of step (d);

35 (f) incorporating the antibody of step (e) into a intravenously administrable pharmaceutical composition.

5 32. A method of producing an anti-NOGO antibody which binds to human  
NOGO-A between amino acids 586-785, particularly 586-685 or 686 to 785 and  
neutralises the activity of said NOGO-A which method comprises the steps of;

(a) providing a first vector encoding a heavy chain of the antibody;

(b) providing a second vector encoding the light chain of the antibody;

10 (c) introducing (e.g.co-transfected) said first and second vectors into a  
mammalian host cell;

(d) culturing the host cell of step (c) in culture media (preferably serum  
free) wherein said host cell secretes into said culture media an  
antibody comprising a light and heavy chain;

15 (e) recovering (and optionally purifying) the secreted antibody of step (d);

33. A method according to claim 29 to 32 wherein the host cell is selected from  
the group consisting of; NS0 Sp2/o, CHO, COS, a fibroblast cell such as 3T3,  
particularly CHO.

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